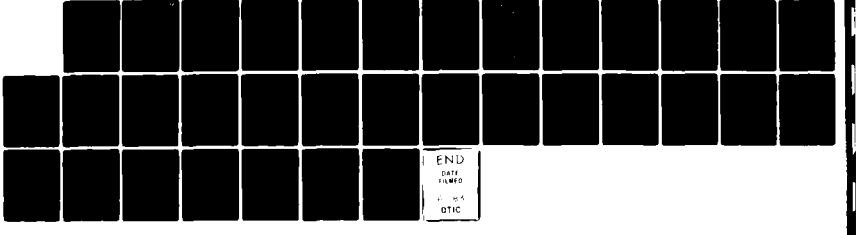
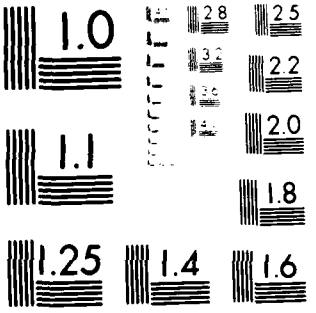
AD-A127 353 19308B MLRS MISSILE NUMBERS BC-645 BC-649 BC-646 BC-650 1/1
BC-648 BC-651 ROU..(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER FEB 83
UNCLASSIFIED ERADCOM/ASL-DR-1290 F/G 4/2 NL





METEOROLOGICAL DATA REPORT

19308B MLRS
Missile Number: BC-645, BC-649, BC-646
BC-650, BC-648, BC-651
Round Number: V-419/JOT-25, V-420/JOT-26, V-421/JOT-27
V-422/JOT-28, V-423/JOT-29, V-424/JOT-30
16 February 1983

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1291	2. GOVT ACCESSION NO. AD-A127 357	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19308F MLRS Missile Number BC-645,BC-649,BC-646, BC-650,BC-648, BC-651, Round Number V-419/JOT-25,V-420/JOT-26, V-421/JOT-27,V-422/JOT-28,V-423/JOT-29,V-424/JOT-30		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
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18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 19308F MLRS, Missile Number BC-645, BC-649, BC-646, BC-650, BC-648, BC-651, Round Number V-419/JOT-25, V-420/JOT-26, V-421/JOT-27, V-422/JOT-28, V-423/JOT-29, V-424/JOT-30 are presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE S/N UNCLASSIFIED

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CONTENTS

INTRODUCTION

19303B MLRS, Missile Numbers BC-645, BC-649, BC-646, BC-650, BC-648 and BC-651 Round Numbers V-419/JOT-25 Thru V-424/JOT-30, were launched from LC-33, White Sands Missile Range (WSMR). New Mexico, at 0940:43, 0940:52, 0940:56, 0941:01 and 0941:05 MST, 16 Feb 83. The scheduled launch times were 0930 MST with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (^{o}C), relative humidity, dew point (^{o}C), density (gm/m^3), wind direction and speed, and cloud cover were made at the Brillo Met Site at T-0 minutes.

(2) Anemometer data were provided from existing tower-mounted anemometers at Brillo. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

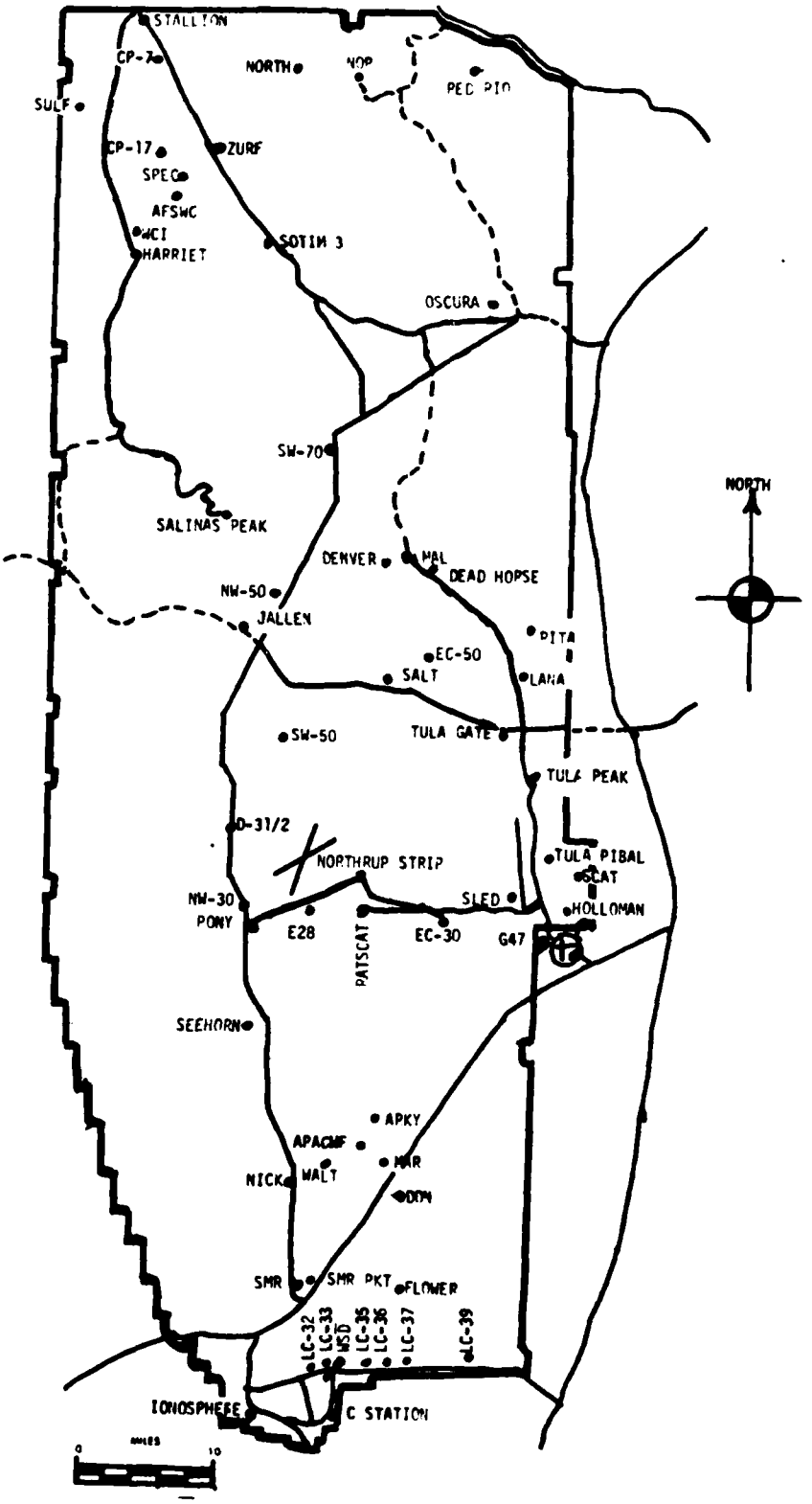
(1) Low level wind data were obtained from pilot-balloon observations at:

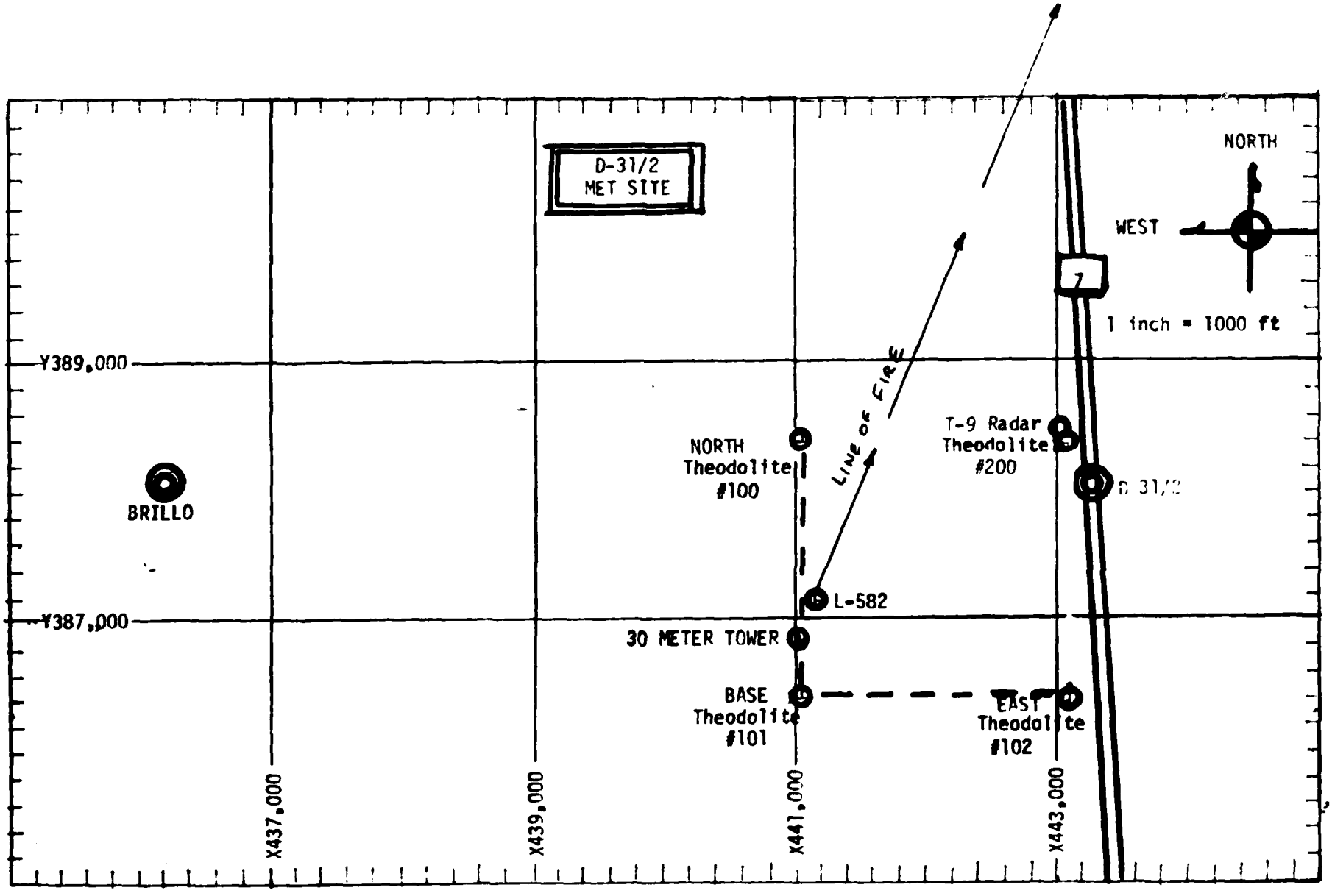
SITE AND ALTITUDE	
D 3½	2 km
Deadhorse	2 km

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME	
E-28	0630 MST
NW-30	0730 MST
E-28	0930 MST

WSMR METEOROLOGICAL SITES




D-31/2
MET SITE
NORTH
WEST
1 inch = 1000 ft
Y389,000
Y387,000
BRILLO
NORTH
Theodolite
#100
LINE OF FIRE
T-9 Radar
Theodolite
#200
D 31/2
L-582
30 METER TOWER
BASE
Theodolite
#101
EAST
Theodolite
#102
X437,000
X439,000
X441,000
X443,000

PROJECT SURFACE OBSERVATION

TABLE 1 STATION BRILLO (MLRS)

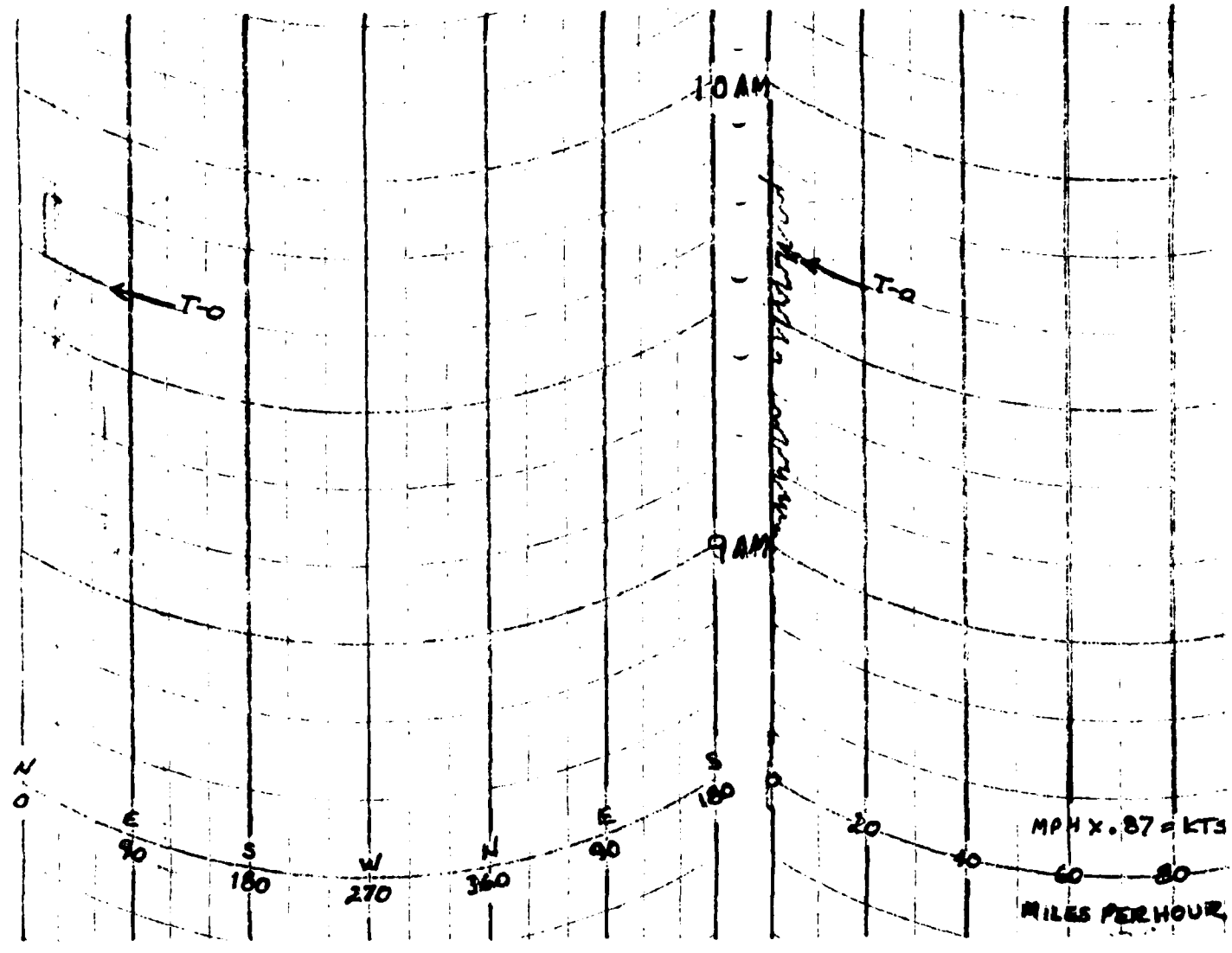
DATE 16 (DAY) Feb (MONTH) 83 (YEAR) X= 441,121.6 Y= 387,107.8 H= 40005.2

TIME M - -	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
0930	879.6		8.1		2.5	68	1110		CALM		UNL.

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
NONE	2	CI	20,000							

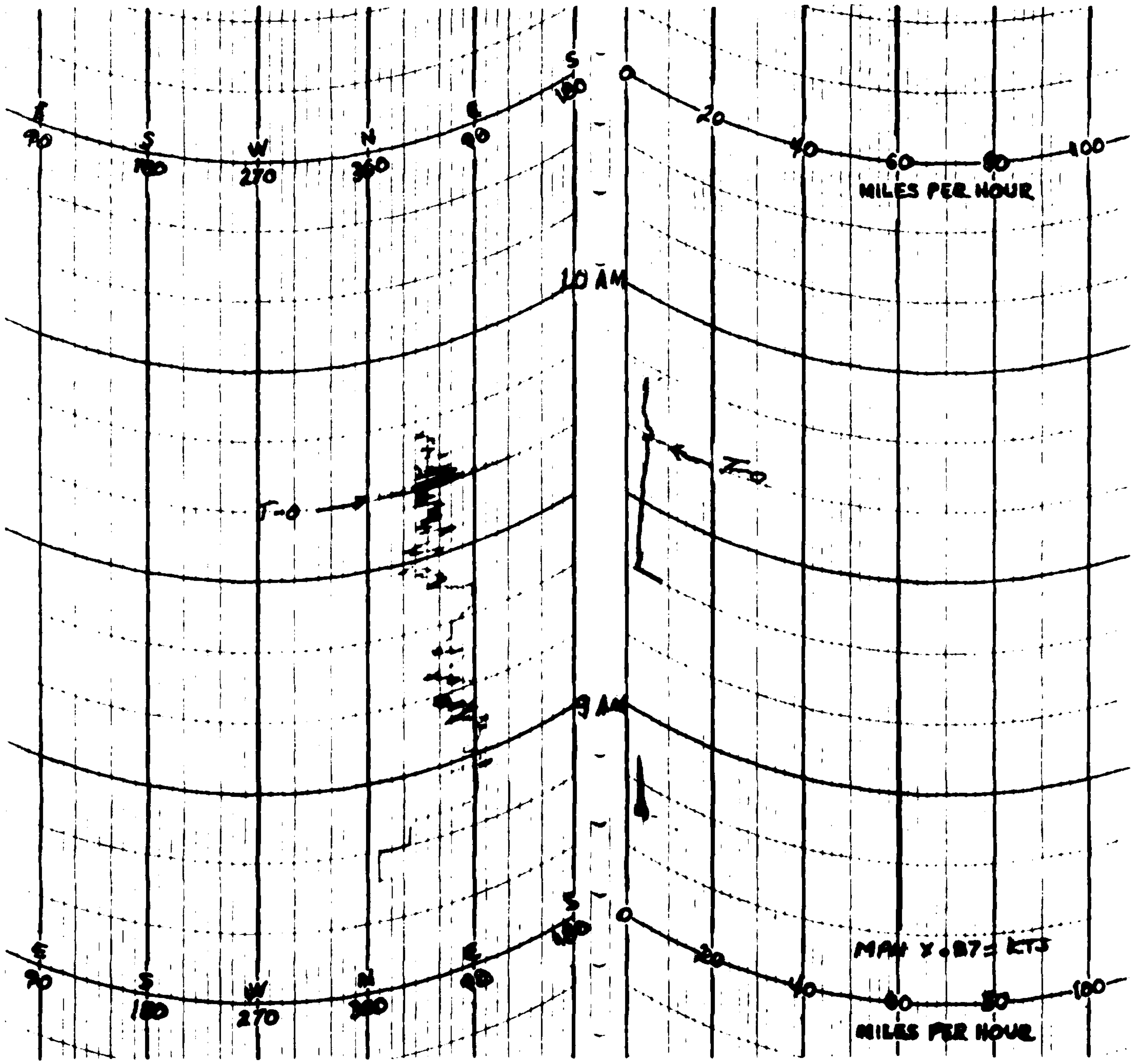
PSYCHROMETRIC COMPUTATION

TIME: MST		0930	
DRY BULB TEMP.		8.1	
WET BULB TEMP.		5.3	
WET BULB DEPR.		2.8	
DEW POINT		2.5	
RELATIVE HUMID.		68	


10 AM
9 AM
T-0
T-0
N
0
E
90
S
180
W
270
N
360
E
90
S
180
0
20
40
60
80
MPH x .87 = KTS
MILES PER HOUR

ABLE 3 Anemometer Data [illegible] Tower

X = 441,018.71 Y = 3[illegible] [illegible] 4,004.[illegible] [illegible]



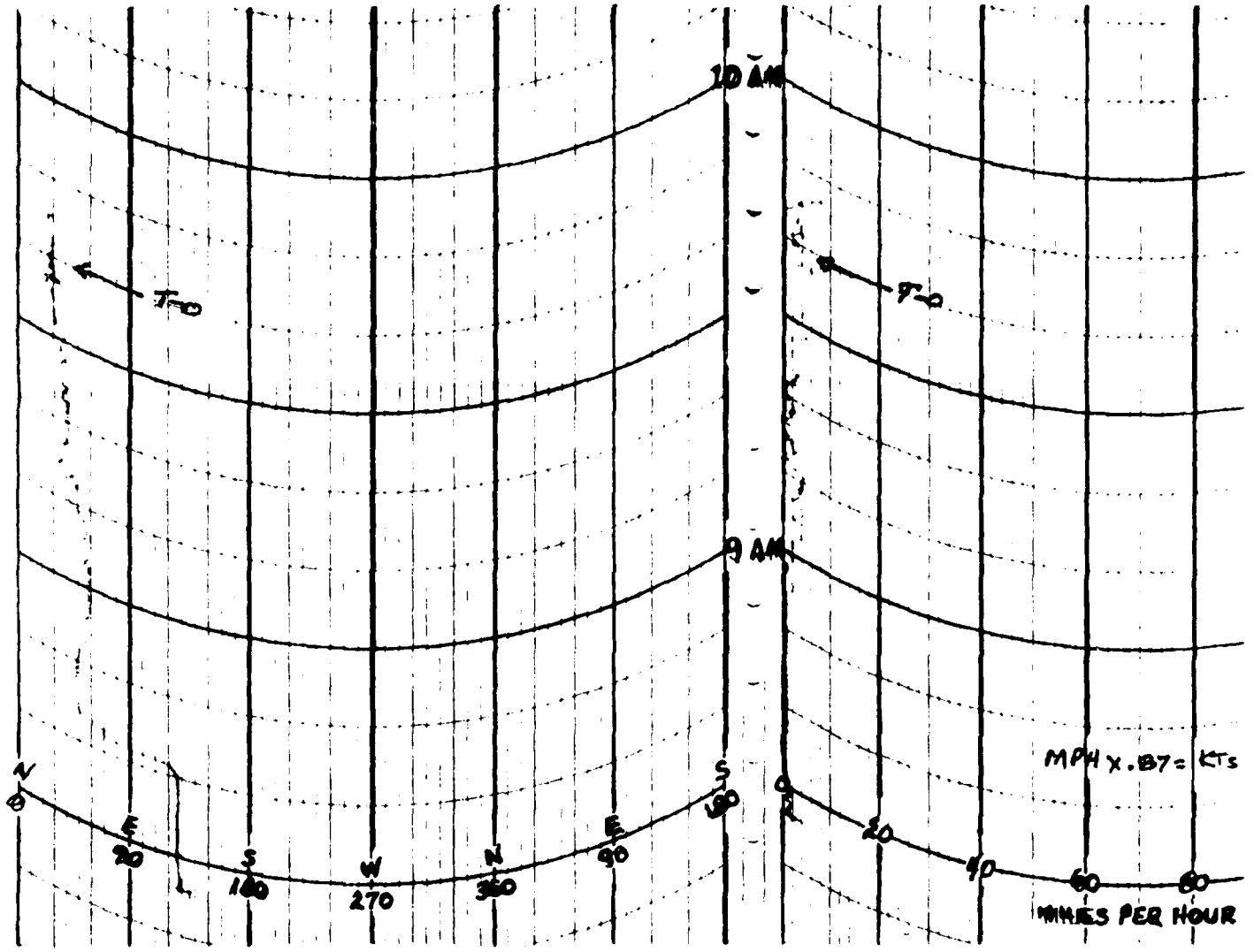

10 AM
9 AM
T=0
T=0
N
0
E
90
S
180
W
270
N
360
E
90
S
180
0
20
40
60
80
MPH x .87 = KTs
MILES PER HOUR

TABLE 5

TWO-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 16 Feb 83

SITE: D 3½
TIME: 0930 MST
WSTM COORDINATES:
X= 441,053.12
Y= 386,316.94
h= 4,008.31

SITE: Deadhorse
TIME: 0930 MST
WSTM COORDINATES:
X= 519,982.11
Y= 490,249.23
h= 4,133.12

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	360	01
150	345	02
210	345	03
270	345	03
330	345	04
390	340	04
500	340	05
650	340	04
800	350	04
950	015	04
1150	020	03
1350	015	03
1550	325	03
1750	290	04
2000	320	07

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		CALM
150	021	02
210	021	03
270	028	03
330	041	03
390	054	03
500	036	02
650	328	04
800	311	05
950	321	09
1150	325	12
1350	325	10
1550	316	11
1750	300	05
2000	334	11

All data obtained from double Theodolite Tracked pilot-balloon observations.

TABLE [illegible]

[illegible] AND T-TIME COMPUTER MET MESSAGES

16 February 1[illegible]

[illegible] MST	NW-30 0730 MST	E-20 0930 MST
[illegible]	METCM1329065	METCM1329064
[illegible]	161450122879	161650119881
[illegible]	10537002 27640679	09071004 27810881
[illegible]	01615006 27970868	01044007 27970870
[illegible]	02608005 28200842	02576002 28200844
[illegible]	03012006 28000803	03007003 28080804
[illegible]	04573007 27750755	04603004 27910657
[illegible]	05527008 27530710	05551006 27640712
[illegible]	06560013 27210667	06589011 27320669
[illegible]	07585017 26920626	07617011 27040628
[illegible]	08572020 26710533	08544014 26780590
[illegible]	09535022 26360551	09504020 26430553
10831032 25910516	10523027 25980516	10511019 26020518
11530035 25460493	11531031 25530483	11511022 25580435
12519028 24760436	12529034 24840436	12527023 24960430
13510029 23910378	13531037 24010380	13553025 24190382
14506032 23600326	14556037 23250329	14559031 23320331
15[illegible]3030 22340282	15554040 22380283	15555030 22410285
16512031 21390242	16544045 21530243	16555033 21570244
17501[illegible] 21040206	17523046 21120207	17529036 21010208
18501[illegible] 21330171	18514042 21400176	18516026 21510177
19494029 21570150	19494043 21540150	19482015 21630151
20[illegible]4028 21500128	20511027 21790129	20515029 21830130
21480029 21430109	21460015 21500110	21484021 21590111
22429016 21190043	22462024 21380094	22467027 21610095
23497019 21070079	23489018 21320080	23532012 21590081
24482013 21280068	24475018 21160068	24486009 21230069
25510009 21070060	25569007 21440058	25522007 21360059
26568009 21360049		26578008 21660056

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 HRS MST
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
0470290007
EAST-28/CHERRY
TABLE 7

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
879.9	3912.7	1.0	-4.6	66.0
875.8	4037.2	5.5	-.8	64.0
850.0	4842.8	7.1	-2.1	52.0
847.1	4935.4	8.6	-1.5	49.0
823.6	5698.0	7.4	-3.7	45.0
771.0	7473.0	4.3	-5.7	48.0
760.6	7835.8	3.8	-11.7	31.0
719.6	9309.0	1.9	-15.1	27.0
700.0	10039.1	.7	-14.9	30.0
680.0	10802.8	-.1	-14.0	34.0
613.8	13470.0	-5.7	-16.5	42.0
535.0	16970.1	-11.9	-24.2	35.0
500.0	18658.9	-16.3	-30.5	28.0
447.6	21357.9	-24.0	-32.3	46.0
432.1	22200.2	-26.3	-31.5	61.0
400.0	24018.6	-31.2	-36.2	61.0
319.3	29137.5	-43.8		
310.7	29738.9	-45.6		
300.0	30504.7	-47.4		
250.0	34384.5	-57.6		
226.1	36450.2	-62.5		
212.1	37744.8	-64.0		
207.8	38158.1	-64.0		
200.0	38933.8	-62.1		
198.3	39108.0	-61.2		
184.7	40564.8	-60.2		
176.3	41525.8	-58.3		
162.9	43166.4	-58.0		
154.7	44239.3	-58.0		
150.0	44882.0	-56.8		
130.5	47782.2	-58.2		
120.5	49439.4	-57.7		
113.6	50663.0	-59.0		
111.1	51124.1	-58.3		
100.0	53309.8	-58.2		
89.1	55677.8	-63.5		
78.9	58148.3	-62.4		
70.0	60593.6	-61.3		
68.3	61099.4	-59.5		
57.3	64717.3	-60.8		

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 HRS MST
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
04702W0007
EAST-2B/CHERRY

GEODETIC COORDINATES
32.49227 LAT DEG
106.40591 LON DEG

TABLE 7
Cont'd

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR	TEMPERATURE DEWPOINT	REL. HUM. PERCENT
		DEGREES CENTIGRADE		
50.0	67523.2	-59.9		
41.7	71293.4	-57.2		

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 GMT, MST
ASCENSION NO. 7

UPPER AIR DATA
0670290007
EAST=287/THEORY

TABLE 1

GEODETIC COORDINATES
32.84927 LAT DEG
[illegible] LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3912.7	879.9	1.0	-4.6	66.0	1116.0	645.6	20.0	4.1	1.000270
4000.0	877.0	4.2	-1.9	64.6	1099.2	649.5	21.3	4.0	1.000271
4500.0	860.9	6.4	-1.4	57.1	1070.1	652.2	30.0	3.6	1.000265
5000.0	845.1	8.5	-1.7	48.7	1042.7	654.6	40.3	3.4	1.000258
5500.0	829.6	7.7	-3.1	46.0	1026.8	653.6	48.1	2.9	1.000252
6000.0	814.4	6.9	-4.1	45.5	1011.0	652.6	54.2	2.1	1.000247
6500.0	799.4	6.0	-4.6	46.4	995.6	651.6	12.6	2.5	1.000241
7000.0	784.7	5.1	-5.2	47.2	980.4	650.5	353.0	4.0	1.000239
7500.0	770.2	4.3	-6.1	46.7	965.4	649.5	345.8	6.0	1.000234
8000.0	755.9	3.6	-12.1	30.6	950.4	648.5	332.8	6.7	1.000224
8500.0	741.8	2.9	-13.2	29.2	935.0	647.7	325.2	7.3	1.000219
9000.0	728.0	2.3	-14.4	27.8	919.8	646.9	324.0	7.2	1.000215
9500.0	714.4	1.6	-15.0	27.8	905.0	646.1	326.9	7.5	1.000211
10000.0	701.0	.8	-14.9	29.8	890.7	645.1	328.9	8.3	1.000208
10500.0	687.9	.2	-14.3	32.4	875.6	644.5	328.1	9.9	1.000205
11000.0	674.9	-.5	-14.2	34.6	861.3	643.6	326.3	11.5	1.000202
11500.0	662.0	-1.6	-14.6	36.1	848.2	642.4	324.1	12.9	1.000199
12000.0	649.4	-2.6	-15.1	37.6	835.4	641.1	321.6	14.2	1.000196
12500.0	637.1	-3.7	-15.5	39.1	822.7	639.9	322.7	15.2	1.000193
13000.0	625.0	-4.7	-16.0	40.6	810.2	638.6	322.2	16.0	1.000190
13500.0	613.1	-5.8	-16.6	41.9	797.9	637.4	319.8	16.9	1.000187
14000.0	601.2	-6.6	-17.7	40.9	785.0	636.3	317.0	18.4	1.000183
14500.0	589.5	-7.5	-18.8	39.9	772.4	635.2	314.4	19.6	1.000179
15000.0	578.0	-8.4	-19.9	38.9	760.0	634.1	311.9	19.9	1.000176
15500.0	566.8	-9.3	-21.0	37.9	747.8	633.1	310.2	19.6	1.000173
16000.0	555.8	-10.2	-22.1	36.9	735.7	632.0	308.9	19.5	1.000170
16500.0	545.0	-11.1	-23.2	35.9	723.9	630.9	308.4	20.1	1.000166
17000.0	534.4	-12.0	-24.3	34.9	712.3	629.8	304.5	20.4	1.000163
17500.0	523.8	-13.3	-26.1	32.8	701.8	628.2	300.6	20.9	1.000160
18000.0	513.4	-14.6	-28.0	30.7	691.4	626.6	297.9	22.0	1.000157
18500.0	503.2	-15.9	-29.9	28.7	681.1	625.0	296.0	23.7	1.000155
19000.0	493.1	-17.3	-30.5	30.3	671.0	623.3	295.5	24.7	1.000152
19500.0	483.0	-18.7	-30.7	33.6	661.1	621.5	297.1	24.2	1.000150
20000.0	473.2	-20.1	-31.0	36.9	651.3	619.8	297.5	24.0	1.000148
20500.0	463.6	-21.6	-31.4	40.3	641.7	618.1	294.8	24.9	1.000146
21000.0	454.2	-23.0	-31.9	43.6	632.3	616.3	291.4	26.7	1.000143
21500.0	444.9	-24.4	-32.1	48.5	622.9	614.6	291.1	28.5	1.000141
22000.0	435.7	-25.8	-31.6	57.4	613.3	612.9	291.8	29.4	1.000139
22500.0	426.6	-27.1	-32.3	61.0	603.8	611.2	291.8	29.2	1.000137
23000.0	417.7	-28.5	-33.6	61.0	594.4	609.5	291.3	28.9	1.000135

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 HRS, MST
ASCENSION NO. 7

UPPER AIR DATA
04702400007
EAST-28/CHERRY
TABLE 2
CORRECTED

GEODETIC COORDINATES
32.83027 LAT DEG
136.40591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	408.9	-29.8	-34.9	61.0	585.2	607.8	290.7	28.8	1.000132
24000.0	400.3	-31.1	-36.2	61.0	576.1	606.1	288.8	29.1	1.000130
24500.0	391.6	-32.4	-38.3	55.3**	566.5	604.6	286.6	29.0	1.000128
25000.0	383.1	-33.6	-40.5	49.3**	557.0	603.0	284.2	28.4	1.000125
25500.0	374.7	-34.8	-42.9	43.3**	547.8	601.4	284.5	28.3	1.000123
26000.0	366.6	-36.1	-45.3	37.4**	538.6	599.9	285.2	28.7	1.000121
26500.0	358.6	-37.3	-48.0	31.4**	529.7	598.3	286.0	29.5	1.000118
27000.0	350.8	-38.5	-50.9	25.5**	520.9	596.7	286.2	31.0	1.000116
27500.0	343.2	-39.8	-54.2	19.5**	512.2	595.2	287.0	32.9	1.000114
28000.0	335.7	-41.0	-58.1	13.6**	503.7	593.6	287.8	34.7	1.000112
28500.0	328.4	-42.2	-63.5	7.6**	495.4	592.0	287.4	34.6	1.000110
29000.0	321.2	-43.5	-75.0	1.6**	487.2	590.4	285.4	33.5	1.000109
29500.0	314.1	-44.9			479.3	588.6	281.9	31.7	1.000107
30000.0	307.0	-46.2			471.3	586.9	278.9	30.3	1.000105
30500.0	300.1	-47.4			463.0	585.4	279.8	29.1	1.000103
31000.0	293.1	-48.7			454.9	583.7	282.1	28.3	1.000101
31500.0	286.3	-50.0			447.0	581.9	284.0	28.4	1.000100
32000.0	279.6	-51.3			439.2	580.2	284.6	29.4	1.000098
32500.0	273.1	-52.6			431.5	578.5	284.5	30.9	1.000096
33000.0	266.8	-54.0			424.0	576.8	284.1	31.4	1.000094
33500.0	260.6	-55.3			416.7	575.0	283.2	32.0	1.000093
34000.0	254.6	-56.6			409.5	573.3	282.1	32.8	1.000091
34500.0	248.6	-57.9			402.3	571.6	285.1	30.8	1.000090
35000.0	242.6	-59.1			394.8	570.0	288.7	29.4	1.000088
35500.0	236.8	-60.2			387.5	568.4	291.3	29.2	1.000086
36000.0	231.1	-61.4			380.3	566.9	291.3	30.4	1.000085
36500.0	225.5	-62.6			373.1	565.3	291.2	31.0	1.000083
37000.0	220.0	-63.1			365.0	564.6	288.9	31.3	1.000081
37500.0	214.7	-63.7			357.1	563.8	282.9	31.4	1.000080
38000.0	209.4	-64.0			348.8	563.4	278.9	32.1	1.000078
38500.0	204.3	-63.2			339.0	564.5	281.7	34.2	1.000075
39000.0	199.4	-61.8			328.5	566.4	286.8	36.5	1.000073
39500.0	194.5	-60.9			319.4	567.5	289.9	36.9	1.000071
40000.0	189.9	-60.6			311.2	568.0	289.8	34.9	1.000069
40500.0	185.3	-60.2			303.2	568.4	288.1	34.1	1.000068
41000.0	180.8	-59.3			294.7	569.7	285.6	34.2	1.000066
41500.0	176.5	-58.4			286.3	571.0	284.0	34.0	1.000064
42000.0	172.3	-58.2			279.3	571.2	282.7	32.9	1.000062
42500.0	168.2	-58.1			272.5	571.3	280.7	31.9	1.000061
43000.0	164.2	-58.0			265.9	571.4	277.6	31.4	1.000059

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 HRS, MST
ASCENSION NO. 7

UPPER AIR DATA
0470290007
EAST-28/CHERRY
TABLE 5
Cont'd

GEODETIC COORDINATES
32.89927 LAT DEG
156.40191 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	160.3	-58.0			259.6	571.4	274.8	29.3	1.000058
44000.0	156.5	-58.0			253.4	571.4	271.3	27.9	1.000056
44500.0	152.8	-57.5			246.8	572.1	268.7	28.2	1.000055
45000.0	149.2	-56.9			240.2	573.0	268.4	30.7	1.000053
45500.0	145.6	-57.1			234.8	572.6	270.6	31.6	1.000052
46000.0	142.2	-57.3			229.5	572.3	273.1	32.3	1.000051
46500.0	138.8	-57.6			224.3	572.0	276.0	31.4	1.000050
47000.0	135.5	-57.8			219.2	571.7	278.5	30.2	1.000049
47500.0	132.3	-58.1			214.2	571.3	278.7	28.0	1.000048
48000.0	129.1	-58.1			209.2	571.3	279.3	25.9	1.000047
48500.0	126.1	-58.0			204.1	571.5	280.4	24.0	1.000045
49000.0	123.1	-57.8			199.1	571.7	287.0	24.1	1.000044
49500.0	120.1	-57.8			194.3	571.7	290.9	24.0	1.000043
50000.0	117.3	-58.3			190.2	571.0	290.4	22.6	1.000042
50500.0	114.5	-58.8			186.1	570.3	274.4	17.4	1.000041
51000.0	111.8	-58.5			181.4	570.8	263.8	16.4	1.000040
51500.0	109.1	-58.3			176.9	571.1	259.5	16.6	1.000039
52000.0	106.5	-58.3			172.7	571.1	265.6	17.9	1.000038
52500.0	104.0	-58.2			168.5	571.1	262.8	16.3	1.000038
53000.0	101.5	-58.2			164.5	571.1	252.6	13.5	1.000037
53500.0	99.1	-58.6			160.9	570.6	245.3	13.3	1.000036
54000.0	96.7	-59.7			157.8	569.1	239.6	14.4	1.000035
54500.0	94.4	-60.9			154.9	567.6	237.2	17.3	1.000034
55000.0	92.1	-62.0			151.9	566.1	239.7	18.9	1.000034
55500.0	89.9	-63.1			149.1	564.6	244.2	20.0	1.000033
56000.0	87.7	-63.4			145.6	564.3	259.6	20.5	1.000032
56500.0	85.6	-63.1			141.9	564.6	272.6	21.2	1.000032
57000.0	83.5	-62.9			138.3	564.9	284.3	21.0	1.000031
57500.0	81.5	-62.7			134.8	565.2	288.9	19.8	1.000030
58000.0	79.5	-62.5			131.4	565.5	290.4	18.1	1.000029
58500.0	77.6	-62.2			128.1	565.8	278.9	18.3	1.000029
59000.0	75.7	-62.0			124.9	566.1	269.4	19.3	1.000028
59500.0	73.8	-61.8			121.7	566.4	262.6	20.8	1.000027
60000.0	72.1	-61.6			118.6	566.7	265.5	20.7	1.000026
60500.0	70.3	-61.3			115.7	567.0	269.8	19.6	1.000026
61000.0	68.6	-59.9			112.1	569.0	272.4	15.8	1.000025
61500.0	67.0	-59.6			109.3	569.2	274.0	11.8	1.000024
62000.0	65.4	-59.8			106.8	569.0	274.2	7.7	1.000024
62500.0	63.8	-60.0			104.3	568.8	281.0	7.5	1.000023
63000.0	62.3	-60.2			101.9	568.5	287.9	8.0	1.000023

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 HRS MST
ASCENSION NO. 7

UPPER AIR DATA
0470290007
EAST-28/CHERRY

TABLE 3
Cont'd

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	60.8	-60.4			99.5	568.3	293.5	9.2	1.000022
64000.0	59.3	-60.5			97.2	568.0	295.8	9.3	1.000022
64500.0	57.9	-60.7			95.0	567.8	296.7	8.6	1.000021
65000.0	56.5	-60.7			92.7	567.8	291.5	7.8	1.000021
65500.0	55.2	-60.5			90.4	568.0	290.1	7.1	1.000020
66000.0	53.8	-60.4			88.2	568.3	306.2	6.9	1.000020
66500.0	52.5	-60.2			86.0	568.5	318.7	7.9	1.000019
67000.0	51.3	-60.1			83.8	568.7	325.9	9.6	1.000019
67500.0	50.1	-59.9			81.8	568.9	323.4	10.5	1.000018
68000.0	48.9	-59.6			79.7	569.4	320.0	11.3	1.000018
68500.0	47.7	-59.2			77.7	569.8	314.3	9.6	1.000017
69000.0	46.6	-58.8			75.7	570.3	306.7	7.9	1.000017
69500.0	45.5	-58.5			73.8	570.8	295.7	6.0	1.000016
70000.0	44.4	-58.1			71.9	571.3			1.000016
70500.0	43.3	-57.8			70.1	571.7			1.000016
71000.0	42.3	-57.4			68.3	572.2			1.000015

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0630 HRS MST
ASCENSION NO. 7

MANDATORY LEVELS
0478290007
EAST-287/CHERRY

SPECIFIC COORDINATES
32.40927 LAT DEG
136.40591 LON DEG

TABLE 9

PRESSURE	GEOPOTENTIAL	TEMPERATURE AIR	TEMPERATURE DEWPOINT	REL.HUM.	WIND DATA DIRECTION	WIND DATA SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE		PERCENT	DEGREES(TN)	KNOTS
850.0	4840.	7.1	-2.1	52.	36.8	5.4
800.0	6477.	6.0	-4.6	46.	13.9	6.5
750.0	8203.	3.1	-12.6	30.	328.0	7.1
700.0	10030.	.7	-14.9	30.	328.8	8.4
650.0	11972.	-2.6	-15.0	36.	321.7	14.2
600.0	14039.	-6.7	-17.8	41.	316.7	18.5
550.0	16252.	-10.7	-22.6	36.	308.7	19.8
500.0	18634.	-16.3	-30.5	28.	295.6	24.2
450.0	21198.	-23.6	-32.1	45.	291.3	27.5
400.0	23980.	-31.2	-36.2	61.	288.8	29.1
350.0	27037.	-38.7	-51.2	25.**	286.3	31.2
300.0	30446.	-47.4			279.8	29.1
250.0	34312.	-57.6			284.3	31.3
200.0	38844.	-62.1			286.3	36.4
175.0	41577.	-58.3			283.6	33.8
150.0	44765.	-56.8			268.4	30.0
125.0	48541.	-57.9			282.5	24.0
100.0	53150.	-58.2			248.5	13.3
80.0	57690.	-62.5			290.9	18.6
70.0	60390.	-61.3			270.0	19.1
60.0	63547.	-60.5			295.5	9.7
50.0	67275.	-59.9			323.4	10.5

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.40 FEET MSL
16 FEB. 83 0730 HRS MST
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
0470220007
NW 30

GEODETIC COORDINATES
32.86497 LAT DEG
106.49714 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
870.9	4010.4	2.5	-1.5	75.0
868.6	4326.0	6.5	-1.2	58.0
850.0	4912.0	8.8	-2.5	45.0
773.6	7452.8	4.6	-6.0	46.0
748.4	8337.7	3.7	-13.1	28.0
700.0	10113.4	1.4	-14.7	29.0
672.2	11180.8	-1.0	-11.1	46.0
650.0	12058.5	-2.9	-16.9	33.0
626.2	13026.9	-4.6	-14.4	46.0
608.0	13789.1	-5.3	-19.7	31.0
582.4	14896.8	-6.5	-19.7	34.0
539.4	16850.2	-11.2	-23.6	35.0
520.1	17766.3	-13.2	-33.6	16.0
500.0	18748.6	-15.7	-31.2	25.0
443.2	21691.4	-24.1	-31.1	52.0
435.4	22116.5	-25.3	-33.7	45.0
420.6	22939.0	-27.5	-35.7	45.0
400.0	24120.2	-30.7	-36.9	54.0
389.3	24751.9	-32.2	-34.7	47.0
381.4	25227.3	-33.0	-36.7	69.0
370.2	25915.3	-34.4	-39.1	62.0
361.0	26493.0	-35.6	-42.8	47.0
349.6	27225.4	-37.2	-47.0	35.0
335.8	28136.8	-39.6	-50.2	31.0
300.0	30640.1	-46.1		
250.0	34541.0	-56.5		
220.8	37101.6	-62.4		
209.4	38179.1	-62.6		
200.0	39113.4	-62.1		
184.6	40871.4	-58.4		
172.2	42197.1	-59.4		
164.6	43128.5	-59.4		
158.0	43979.0	-56.4		
150.0	45060.1	-58.9		
146.4	45562.1	-59.4		
137.8	46826.1	-54.5		
121.2	49528.3	-55.9		
105.8	52350.5	-59.1		
100.0	53524.9	-59.4		
86.8	57029.6	-59.4		

STATION ALTITUDE 9010.40 FEET MSL
16 FEB. 63 0730 HRS MST
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
04702.0007
RW 10

GEODETIC COORDINATES
12.88497 LAT DEG
107.47714 LON DEG

TABLE 10
Cont'd

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
70.0	60877.7	-61.9		
65.0	62391.1	-62.1		
60.7	63800.5	-58.4		
50.0	67822.2	-59.2		
47.4	68930.9	-58.0		

STATION ALTITUDE 4010.40 FEET MSL

16 FEB. 83 0730 HRS MST

ASCENSION NO. 7

UPPER AIR DATA
0470220007
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 11

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4010.4	878.9	2.5	-1.5	75.0	1108.1	647.6	330.0	1.9	1.000274
4500.0	863.0	7.2	-1.5	54.1	1069.9	653.1	337.9	2.7	1.000265
5000.0	847.2	8.7	-2.6	45.0	1045.0	654.7	342.4	3.4	1.000257
5500.0	831.7	7.8	-3.3	45.2	1028.9	653.7	345.3	4.2	1.000252
6000.0	816.4	7.0	-4.0	45.4	1013.0	652.8	357.4	5.0	1.000248
6500.0	801.4	6.2	-4.7	45.6	997.5	651.8	7.2	6.1	1.000243
7000.0	786.7	5.3	-5.4	45.8	982.1	650.8	5.0	7.0	1.000239
7500.0	772.2	4.6	-6.3	45.0	966.9	649.8	352.6	7.1	1.000234
8000.0	757.9	4.0	-10.1	34.9	951.2	649.1	326.4	7.2	1.000226
8500.0	743.8	3.5	-13.2	28.1	935.7	648.3	309.4	7.5	1.000219
9000.0	730.0	2.8	-13.7	28.4	920.4	647.6	298.7	7.9	1.000216
9500.0	716.4	2.2	-14.1	28.7	905.4	646.8	295.4	7.6	1.000212
10000.0	703.0	1.5	-14.6	28.9	890.6	646.0	302.7	8.0	1.000208
10500.0	689.8	.5	-13.1	35.2	877.0	644.9	311.2	8.9	1.000207
11000.0	676.8	-.6	-11.6	43.1	863.9	643.6	317.5	10.9	1.000205
11500.0	664.0	-1.7	-13.1	41.3	851.1	642.3	321.4	12.7	1.000201
12000.0	651.5	-2.8	-16.5	33.9	838.5	640.9	324.0	14.2	1.000196
12500.0	639.0	-3.7	-15.6	38.9	825.2	639.9	326.9	15.6	1.000193
13000.0	626.8	-4.6	-14.5	45.6	812.0	638.9	329.6	17.0	1.000191
13500.0	614.8	-5.0	-17.5	36.7	798.1	638.2	330.2	18.4	1.000186
14000.0	603.0	-5.5	-19.7	31.6	784.4	637.6	328.2	19.5	1.000181
14500.0	591.4	-6.1	-19.7	32.9	770.8	636.9	323.1	20.1	1.000179
15000.0	580.0	-6.7	-19.9	34.1	757.9	636.1	314.3	20.1	1.000176
15500.0	568.8	-8.0	-20.9	34.3	746.6	634.7	306.2	20.5	1.000173
16000.0	557.7	-9.2	-21.9	34.6	735.4	633.2	301.9	21.3	1.000170
16500.0	546.9	-10.4	-22.9	34.8	724.5	631.8	298.8	23.2	1.000167
17000.0	536.2	-11.5	-24.9	31.9	713.6	630.3	296.7	25.5	1.000163
17500.0	525.6	-12.6	-30.1	21.5	702.6	628.9	295.5	27.0	1.000159
18000.0	515.2	-13.8	-32.8	18.1	691.9	627.5	295.3	27.9	1.000156
18500.0	505.0	-15.1	-31.6	22.7	681.5	626.0	296.2	28.1	1.000154
19000.0	494.9	-16.4	-30.9	27.3	671.3	624.3	297.5	28.9	1.000152
19500.0	484.8	-17.8	-30.5	31.9	661.3	622.6	298.8	30.1	1.000150
20000.0	475.0	-19.3	-30.4	36.5	651.5	620.9	299.2	32.0	1.000148
20500.0	465.4	-20.7	-30.4	41.1	641.9	619.1	299.6	33.5	1.000146
21000.0	455.9	-22.1	-30.6	45.7	632.5	617.4	300.1	34.0	1.000144
21500.0	446.7	-23.6	-31.0	50.2	623.2	615.6	299.6	33.8	1.000142
22000.0	437.5	-25.0	-33.0	46.9	613.9	613.8	298.3	33.3	1.000139
22500.0	428.4	-26.3	-34.7	45.0	604.5	612.1	295.8	33.0	1.000137
23000.0	419.5	-27.7	-35.8	45.5	595.2	610.5	294.1	33.0	1.000134
23500.0	410.7	-29.0	-36.3	49.3	585.9	608.8	293.7	33.4	1.000132

STATION ALTITUDE 4010.40 FEET MSL
16 FEB. 83 0730 HRS MST
ASCENSION NO. 7

UPPER AIR DATA
0470220007
NW 30

TABLE 11
Cont'd

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	402.0	-30.4	-36.8	53.1	576.8	607.1	294.4	34.4	1.000130
24500.0	393.5	-31.6	-38.6	49.8	567.4	605.5	295.5	35.7	1.000128
25000.0	385.2	-32.6	-38.0	58.5	557.7	604.3	298.1	38.1	1.000126
25500.0	376.9	-33.6	-37.6	66.2	547.9	603.1	300.0	39.0	1.000124
26000.0	368.8	-34.6	-39.6	59.8	538.5	601.8	301.5	38.4	1.000121
26500.0	360.9	-35.6	-42.9	46.9	529.2	600.5	304.6	36.5	1.000119
27000.0	353.1	-36.7	-45.6	38.7	520.1	599.1	308.5	34.9	1.000117
27500.0	345.4	-37.9	-47.9	33.8	511.5	597.5	312.8	35.6	1.000114
28000.0	337.8	-39.2	-49.7	31.6	503.1	595.8	315.1	36.3	1.000112
28500.0	330.4	-40.5	-52.3	26.5**	494.7	594.2	315.6	36.7	1.000111
29000.0	323.0	-41.8	-55.7	20.3**	486.4	592.5	313.0	37.2	1.000109
29500.0	315.8	-43.1	-59.6	14.1**	478.3	590.8	309.3	37.7	1.000107
30000.0	308.8	-44.4	-65.0	7.9**	470.3	589.2	308.5	38.7	1.000105
30500.0	301.9	-45.7	-76.3	1.7**	462.5	587.5	308.5	39.6	1.000103
31000.0	295.0	-47.1			454.5	585.8	310.8	40.2	1.000101
31500.0	288.2	-48.4			446.7	584.1	312.1	40.7	1.000099
32000.0	281.5	-49.7			439.0	582.3	312.4	40.8	1.000098
32500.0	275.0	-51.1			431.4	580.6	312.5	40.9	1.000096
33000.0	268.7	-52.4			424.0	578.8	312.4	41.0	1.000094
33500.0	262.5	-53.7			416.7	577.1	311.3	42.0	1.000093
34000.0	256.4	-55.1			409.6	575.3	310.1	43.0	1.000091
34500.0	250.5	-56.4			402.6	573.6	309.0	44.2	1.000090
35000.0	244.5	-57.6			395.1	572.0	306.9	44.8	1.000088
35500.0	238.6	-58.7			387.7	570.5	304.4	45.3	1.000086
36000.0	232.9	-59.9			380.4	569.0	302.3	46.2	1.000085
36500.0	227.3	-61.0			373.3	567.4	300.5	47.1	1.000083
37000.0	221.9	-62.2			366.4	565.9	298.9	47.8	1.000082
37500.0	216.5	-62.5			358.0	565.5	296.9	47.2	1.000080
38000.0	211.3	-62.6			349.5	565.3	293.8	44.5	1.000078
38500.0	206.1	-62.4			340.8	565.5	291.9	43.2	1.000076
39000.0	201.1	-62.2			332.1	565.9	291.2	42.8	1.000074
39500.0	196.3	-61.3			322.7	567.1	293.2	43.5	1.000072
40000.0	191.6	-60.2			313.4	568.5	296.6	44.8	1.000070
40500.0	186.9	-59.2			304.4	569.9	296.3	45.1	1.000068
41000.0	182.5	-58.5			296.1	570.8	294.4	45.0	1.000066
41500.0	178.1	-58.9			289.6	570.3	290.4	45.0	1.000064
42000.0	173.8	-59.3			283.1	569.8	285.6	45.3	1.000063
42500.0	169.7	-59.4			276.6	569.6	283.5	44.7	1.000062
43000.0	165.6	-59.4			269.9	569.6	282.4	43.5	1.000060
43500.0	161.7	-58.1			261.9	571.3	281.2	42.4	1.000058

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.40 FEET MSL
16 FEB. 83 0730 HRS MST
ASCENSION NO. 7

UPPER AIR DATA
0470220007
NW 30
TABLE II
Cont'd

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	157.8	-56.4			253.7	573.5	279.9	41.3	1.000057
44500.0	154.1	-57.6			249.0	572.0	277.8	40.8	1.000055
45000.0	150.4	-58.8			244.4	570.4	275.1	40.9	1.000054
45500.0	146.8	-59.3			239.2	569.7	274.1	41.1	1.000053
46000.0	143.4	-57.7			231.8	571.8	274.6	41.5	1.000052
46500.0	140.0	-55.8			224.3	574.4	276.3	41.2	1.000050
47000.0	136.7	-54.6			217.8	575.9	280.3	39.9	1.000049
47500.0	133.5	-54.8			213.0	575.6	284.3	38.8	1.000047
48000.0	130.3	-55.1			208.2	575.3	287.4	38.2	1.000046
48500.0	127.3	-55.4			203.6	574.9	290.6	37.8	1.000045
49000.0	124.3	-55.6			199.0	574.6	292.2	33.6	1.000044
49500.0	121.4	-55.9			194.6	574.2	294.2	29.3	1.000043
50000.0	118.5	-56.4			190.5	573.5	293.3	24.3	1.000042
50500.0	115.7	-57.0			186.4	572.8	289.2	18.8	1.000042
51000.0	112.9	-57.6			182.5	572.0	278.2	14.4	1.000041
51500.0	110.3	-58.1			178.6	571.3	254.0	13.2	1.000040
52000.0	107.6	-58.7			174.9	570.5	229.9	14.5	1.000039
52500.0	105.1	-59.1			171.1	569.9	233.6	15.7	1.000038
53000.0	102.6	-59.3			167.1	569.8	237.1	16.9	1.000037
53500.0	100.1	-59.4			163.2	569.6	248.8	19.3	1.000036
54000.0	97.7	-59.4			159.3	569.6	261.0	23.2	1.000035
54500.0	95.4	-59.4			155.5	569.6	266.7	26.9	1.000035
55000.0	93.1	-59.4			151.7	569.6	265.6	28.6	1.000034
55500.0	90.9	-59.4			148.1	569.6	264.5	30.3	1.000033
56000.0	88.7	-59.4			144.6	569.6	268.3	29.4	1.000032
56500.0	86.6	-59.4			141.1	569.6	272.4	28.6	1.000031
57000.0	84.5	-59.4			137.7	569.6	275.5	26.3	1.000031
57500.0	82.5	-59.4			134.5	569.6	278.4	23.0	1.000030
58000.0	80.5	-59.5			131.3	569.5	280.4	20.0	1.000029
58500.0	78.6	-59.9			128.4	568.9	275.3	17.3	1.000029
59000.0	76.7	-60.3			125.5	568.4	268.4	14.9	1.000028
59500.0	74.9	-60.7			122.8	567.8	263.6	16.0	1.000027
60000.0	73.1	-61.2			120.0	567.2	260.3	17.9	1.000027
60500.0	71.3	-61.6			117.4	566.7	259.3	19.0	1.000026
61000.0	69.6	-61.9			114.8	566.2	260.7	18.7	1.000026
61500.0	67.9	-62.0			112.0	566.1	262.3	18.4	1.000025
62000.0	66.3	-62.0			109.3	566.1	264.3	17.2	1.000024
62500.0	64.7	-61.8			106.6	566.3	277.1	16.3	1.000024
63000.0	63.1	-60.5			103.4	568.1	282.2	15.1	1.000023
63500.0	61.6	-59.2			100.3	569.9	286.0	13.7	1.000022

STATION ALTITUDE 4010.40 FEET MSL
16 FEB. 83 0730 HRS MST
ASCENSION NO. 7

UPPER AIR DATA
0470220007
NW 30
TABLE 11
Cont'd

GEODETIC COORDINATES
32.68497 LAT DEG
106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	60.1	-58.4			97.5	570.9	291.7	11.8	1.000022
64500.0	58.7	-58.5			95.3	570.7	306.9	8.4	1.000021
65000.0	57.3	-58.6			93.0	570.6	336.4	6.3	1.000021
65500.0	55.9	-58.7			90.9	570.5	341.8	6.5	1.000020
66000.0	54.6	-58.8			88.7	570.3	338.5	6.9	1.000020
66500.0	53.3	-58.9			86.7	570.2			1.000019
67000.0	52.0	-59.0			84.6	570.1			1.000019
67500.0	50.8	-59.1			82.7	569.9			1.000018
68000.0	49.6	-59.0			80.6	570.1			1.000018
68500.0	48.4	-58.5			78.5	570.8			1.000017

STATION ALTITUDE 4010.40 FEET MSL
16 FEB. 83 0730 HRS MST
ASCENSION NO. 7

MANDATORY LEVELS
NW 30

GEODETIC COORDINATES
32.84497 LAT DEG
106.49716 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION (DEGREES TRUE)	WIND DATA SPEED KNOTS
850.0	4909.	8.8	-2.5	45.	241.8	5.3
800.0	6547.	6.1	-4.7	46.	7.0	6.2
750.0	8274.	3.8	-12.5	29.	316.3	7.4
700.0	10104.	1.4	-14.7	29.	304.7	8.2
650.0	12046.	-2.9	-16.9	33.	324.2	14.3
600.0	14115.	-5.7	-19.7	32.	326.9	19.6
550.0	16338.	-10.0	-22.6	35.	299.6	24.5
500.0	18723.	-15.7	-31.2	25.	296.7	28.3
450.0	21294.	-23.0	-30.8	49.	300.0	34.0
400.0	24081.	-30.7	-36.9	54.	294.6	34.7
350.0	27152.	-37.1	-46.8	35.	310.1	35.1
300.0	30581.	-46.1			309.1	39.8
250.0	34468.	-56.5			308.9	44.2
200.0	39022.	-62.1			291.0	42.8
175.0	41761.	-59.1			287.1	45.2
150.0	44942.	-58.9			274.9	40.9
125.0	48743.	-55.6			291.7	34.8
100.0	53363.	-59.4			288.8	19.3
80.0	57947.	-59.6			279.4	19.4
70.0	60673.	-61.9			260.3	18.8
60.0	63816.	-58.4			291.9	11.7
50.0	67571.	-59.2				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.7% FEET MSL
16 FEB. 83 0430 GMT
ASCENSION NO. 8

SIGNIFICANT LEVEL DATA
04702+00000

EAST-28% CHERRY

PRESSURE MILLIBARS	GEOPOTENTIAL ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	RELATIVE HUM. PERCENT
886.7	3912.7	3.9	1.9	87.0
874.6	4098.8	4.8	-.4	64.0
862.2	4883.3	7.4	-1.3	59.0
850.0	4869.5	8.5	-1.9	60.0
805.9	6313.4	7.4	-4.0	49.0
780.1	6881.8	6.1	-5.2	48.0
771.6	7085.8	6.5	-9.0	32.0
711.9	9641.8	2.9	-12.1	32.0
700.0	10089.5	2.1	-10.1	40.0
652.2	11953.0	-1.7	-12.6	43.0
583.8	14828.6	-6.0	-17.7	39.0
548.9	16405.4	-9.4	-22.6	33.0
500.0	18750.3	-15.3	-27.6	34.0
469.4	20358.3	-19.8	-33.6	28.0
441.8	21776.5	-23.0	-37.5	25.0
421.2	22920.5	-26.1	-37.2	36.0
400.0	24144.2	-28.5	-41.6	27.0
337.3	28081.8	-38.6	-50.2	28.0
300.0	30689.1	-46.2		
250.0	34589.2	-56.5		
207.9	38369.8	-64.8		
203.5	38799.7	-65.0		
200.0	39150.1	-62.7		
197.5	39405.5	-62.9		
191.8	40003.9	-59.9		
182.0	41087.4	-58.3		
166.8	42901.6	-57.0		
158.0	44029.3	-58.3		
150.0	45110.5	-57.0		
138.4	46801.0	-54.3		
124.0	49117.5	-55.4		
120.0	49807.2	-55.4		
109.0	51817.7	-59.0		
100.0	53609.3	-58.0		
85.9	56788.2	-55.5		
70.0	61038.3	-61.3		
64.5	62714.9	-61.3		
50.0	67995.6	-56.3		
41.3	72026.4	-54.3		

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0930 HRS MST
ASCENSION NO. 8

UPPER AIR DATA
047029008
EAST-28/CHERRY

GEODETIC COORDINATES
32.69927 LAT DEG
136.40591 LON DEG

TABLE 14

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3912.7	880.7	3.9	1.9	87.0	1104.1	649.4	40.0	4.1	1.000281
4000.0	877.8	4.3	.9	78.6	1099.0	649.9	38.4	3.9	1.000277
4500.0	861.7	7.4	-1.3	53.7	1067.2	653.4	25.8	3.0	1.000264
5000.0	845.9	8.4	-2.1	47.6	1044.2	654.5	4.2	2.3	1.000258
5500.0	830.5	8.0	-2.8	46.3	1026.6	654.0	334.8	2.1	1.000253
6000.0	815.3	7.6	-3.6	44.9	1009.3	653.5	354.9	2.6	1.000247
6500.0	800.3	7.0	-4.4	44.0	993.3	652.7	2.0	3.3	1.000243
7000.0	785.6	6.2	-5.9	41.7	978.0	651.7	357.6	4.1	1.000237
7500.0	771.2	6.5	-9.0	32.0	959.3	651.9	351.9	4.1	1.000229
8000.0	756.9	5.6	-9.7	32.0	944.4	651.0	343.5	3.7	1.000225
8500.0	742.9	4.8	-10.5	32.0	929.8	650.0	332.3	3.9	1.000221
9000.0	729.2	4.0	-11.2	32.0	915.4	649.0	320.9	4.5	1.000217
9500.0	715.7	3.1	-11.9	32.0	901.2	648.0	310.2	5.5	1.000213
10000.0	702.4	2.3	-10.4	38.4	887.1	647.0	315.5	6.8	1.000211
10500.0	689.2	1.3	-10.6	40.7	873.6	645.8	323.4	8.4	1.000208
11000.0	676.2	.2	-11.3	41.5	860.4	644.6	329.1	9.8	1.000205
11500.0	663.5	-.8	-12.0	42.3	847.4	643.4	332.2	10.4	1.000201
12000.0	651.0	-1.8	-12.7	42.9	834.6	642.2	334.1	9.9	1.000198
12500.0	638.6	-2.5	-13.6	42.2	821.0	641.3	341.8	10.3	1.000194
13000.0	626.4	-3.3	-14.4	41.5	807.6	640.4	345.6	10.9	1.000190
13500.0	614.5	-4.0	-15.3	40.8	794.4	639.5	339.5	11.6	1.000187
14000.0	602.7	-4.8	-16.2	40.2	781.5	638.6	325.4	12.2	1.000183
14500.0	591.2	-5.5	-17.1	39.5	768.8	637.7	307.7	13.8	1.000180
15000.0	579.9	-6.4	-18.2	38.3	756.5	636.6	296.1	16.0	1.000176
15500.0	568.7	-7.4	-19.8	36.4	745.0	635.3	288.4	18.3	1.000173
16000.0	557.7	-8.5	-21.3	34.5	733.6	634.0	284.9	19.2	1.000169
16500.0	546.8	-9.6	-22.8	33.0	722.4	632.6	283.9	19.4	1.000166
17000.0	536.1	-10.9	-23.9	33.3	711.6	631.1	285.0	18.7	1.000163
17500.0	525.5	-12.2	-24.9	33.5	701.0	629.6	286.1	18.8	1.000161
18000.0	515.2	-13.4	-26.0	33.7	690.6	628.0	287.0	19.1	1.000158
18500.0	505.0	-14.7	-27.0	33.9	680.3	626.5	286.7	19.8	1.000155
19000.0	495.0	-16.0	-28.5	33.1	670.2	624.9	286.9	20.9	1.000153
19500.0	485.0	-17.4	-30.5	31.2	660.4	623.1	287.4	22.2	1.000150
20000.0	475.3	-18.8	-32.2	29.3	650.7	621.4	288.9	23.1	1.000147
20500.0	465.7	-20.1	-34.0	27.7	640.9	619.8	290.3	22.8	1.000145
21000.0	456.2	-21.2	-35.3	26.6	630.7	618.4	291.6	22.2	1.000142
21500.0	446.9	-22.4	-36.7	25.6	620.6	617.0	292.3	22.4	1.000140
22000.0	437.7	-23.6	-37.4	26.8	610.9	615.5	294.7	23.0	1.000138
22500.0	428.7	-25.0	-37.2	30.7	601.5	613.8	298.3	23.7	1.000135
23000.0	419.8	-26.3	-37.5	33.5	592.2	612.2	305.2	23.5	1.000133

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0930 HRS MST
ASCENSION NO. 8

UPPER AIR DATA
0470290008
EAST-28/CHERRY
TABLE 14
Cont'd

GEODETIC COORDINATES
32.49427 LAT DEG
[illegible] LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	411.0	-27.2	-39.2	30.7	582.2	611.0	309.4	23.7	1.000131
24000.0	402.4	-28.2	-41.0	27.8	572.3	609.7	311.5	23.8	1.000129
24500.0	393.9	-29.4	-42.3	27.1	562.9	608.3	309.4	23.8	1.000126
25000.0	385.4	-30.7	-43.4	27.2	553.8	606.6	309.6	24.0	1.000124
25500.0	377.2	-32.0	-44.5	27.3	544.8	605.0	311.1	24.4	1.000122
26000.0	369.1	-33.3	-45.6	27.5	536.0	603.4	312.7	26.2	1.000120
26500.0	361.2	-34.5	-46.7	27.6	527.3	601.8	313.5	27.7	1.000118
27000.0	353.5	-35.8	-47.8	27.7	518.8	600.2	313.8	28.9	1.000116
27500.0	345.9	-37.1	-48.9	27.9	510.5	598.6	314.1	30.6	1.000114
28000.0	338.5	-38.4	-50.0	28.0	502.3	596.9	314.2	32.2	1.000112
28500.0	331.0	-39.8	-52.7	23.5**	494.2	595.1	314.1	33.4	1.000110
29000.0	323.7	-41.3	-56.1	18.1**	486.3	593.2	314.2	33.0	1.000109
29500.0	316.5	-42.7	-60.1	12.8**	478.5	591.4	314.2	31.3	1.000107
30000.0	309.4	-44.2	-65.3	7.4**	470.8	589.5	314.0	29.9	1.000105
30500.0	302.6	-45.6	-75.2	2.0**	463.3	587.6	313.7	29.1	1.000103
31000.0	295.7	-47.0			455.5	585.8	313.4	30.1	1.000101
31500.0	288.8	-48.3			447.6	584.1	313.0	30.8	1.000100
32000.0	282.2	-49.7			439.8	582.4	312.7	31.1	1.000098
32500.0	275.6	-51.0			432.2	580.7	311.2	30.4	1.000096
33000.0	269.3	-52.3			424.8	579.0	310.4	30.5	1.000095
33500.0	263.1	-53.6			417.4	577.2	310.4	31.8	1.000093
34000.0	257.0	-54.9			410.3	575.5	311.4	32.3	1.000091
34500.0	251.0	-56.3			403.2	573.7	312.4	32.6	1.000090
35000.0	245.0	-57.4			395.7	572.2	312.7	32.4	1.000088
35500.0	239.1	-58.5			388.1	570.8	313.1	32.3	1.000086
36000.0	233.4	-59.6			380.7	569.3	312.7	32.1	1.000085
36500.0	227.8	-60.7			373.4	567.8	309.0	30.9	1.000083
37000.0	222.3	-61.8			366.3	566.4	304.1	31.1	1.000082
37500.0	216.9	-62.9			359.4	564.9	298.9	32.3	1.000080
38000.0	211.7	-64.0			352.6	563.4	296.0	35.2	1.000079
38500.0	206.6	-64.9			345.5	562.1	294.5	37.9	1.000077
39000.0	201.5	-63.7			335.1	563.8	295.8	39.2	1.000075
39500.0	196.6	-62.4			325.0	565.5	299.3	38.0	1.000072
40000.0	191.8	-59.9			313.4	568.9	304.6	35.3	1.000070
40500.0	187.2	-59.2			304.8	569.9	302.8	29.8	1.000068
41000.0	182.8	-58.4			296.5	570.9	296.7	25.5	1.000066
41500.0	178.4	-58.0			288.9	571.4	284.4	23.5	1.000064
42000.0	174.2	-57.6			281.6	571.9	278.7	23.7	1.000063
42500.0	170.1	-57.3			274.4	572.4	275.4	24.3	1.000061
43000.0	166.0	-57.1			267.7	572.8	274.9	24.5	1.000060

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0930 HRS MST
ASCENSION NO. 8

UPPER AIR DATA
047029000A
EAST-28/CHERRY

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

TABLE 14
Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	162.1	-57.7			262.0	571.8	275.1	25.4	1.000058
44000.0	158.2	-58.3			256.5	571.1	275.7	26.6	1.000057
44500.0	154.5	-57.7			249.8	571.8	275.5	28.4	1.000056
45000.0	150.8	-57.1			243.2	572.6	274.7	30.0	1.000054
45500.0	147.2	-56.4			236.6	573.6	273.0	31.3	1.000053
46000.0	143.8	-55.6			230.2	574.6	274.6	31.0	1.000051
46500.0	140.4	-54.8			224.0	575.7	279.3	29.5	1.000050
47000.0	137.1	-54.4			218.3	576.2	284.1	27.5	1.000049
47500.0	133.9	-54.6			213.4	575.9	289.5	25.3	1.000048
48000.0	130.7	-54.9			208.7	575.6	287.6	24.4	1.000046
48500.0	127.7	-55.1			204.0	575.3	284.2	23.8	1.000045
49000.0	124.7	-55.3			199.4	575.0	283.7	23.6	1.000044
49500.0	121.8	-55.4			194.8	574.9	283.7	23.5	1.000043
50000.0	118.9	-55.6			190.4	574.5	284.6	23.3	1.000042
50500.0	116.1	-56.3			186.5	573.7	285.8	23.2	1.000042
51000.0	113.3	-56.9			182.6	572.8	287.2	23.0	1.000041
51500.0	110.7	-57.6			178.8	572.0	276.5	20.4	1.000040
52000.0	108.0	-58.0			174.9	571.4	263.0	18.9	1.000039
52500.0	105.5	-58.0			170.8	571.4	252.2	22.0	1.000038
53000.0	103.0	-58.0			166.7	571.4	247.6	25.3	1.000037
53500.0	100.5	-58.0			162.8	571.4	255.8	27.4	1.000036
54000.0	98.1	-57.7			158.7	571.8	261.2	29.1	1.000035
54500.0	95.8	-57.3			154.7	572.4	262.9	28.8	1.000034
55000.0	93.6	-56.9			150.7	572.9	264.5	27.8	1.000034
55500.0	91.4	-56.5			146.9	573.4	266.1	25.8	1.000033
56000.0	89.2	-56.1			143.2	573.9	275.2	22.0	1.000032
56500.0	87.1	-55.7			139.5	574.4	293.4	18.6	1.000031
57000.0	85.0	-55.8			136.3	574.4	305.1	16.2	1.000030
57500.0	83.0	-56.5			133.5	573.5	310.8	14.3	1.000030
58000.0	81.0	-57.2			130.7	572.6	308.2	11.4	1.000029
58500.0	79.1	-57.8			128.0	571.7	293.2	9.3	1.000029
59000.0	77.2	-58.5			125.3	570.7	272.6	10.6	1.000028
59500.0	75.4	-59.2			122.7	569.8	260.5	12.8	1.000027
60000.0	73.6	-59.9			120.2	568.9	260.7	15.0	1.000027
60500.0	71.8	-60.6			117.7	568.0	263.1	16.5	1.000026
61000.0	70.1	-61.2			115.3	567.1	272.4	16.3	1.000026
61500.0	68.4	-61.3			112.5	567.0	281.4	15.9	1.000025
62000.0	66.8	-61.3			109.8	567.0	290.3	14.6	1.000024
62500.0	65.2	-61.3			107.2	567.0	297.7	13.4	1.000024
63000.0	63.6	-61.0			104.5	567.4	301.0	12.0	1.000023

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0930 HRS MST
ASCENSION NO. 8

UPPER AIR DATA
047029008
EAST-28/CHERRY
TABLE 14
Cont'd

GEODETIC COORDINATES
32.84927 LAT DEG
136.48591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.1	-60.6			101.8	568.0	302.1	9.9	1.000023
64000.0	60.6	-60.1			99.1	568.7	298.9	7.1	1.000022
64500.0	59.2	-59.6			96.5	569.3	296.6	4.8	1.000022
65000.0	57.8	-59.1			94.0	569.9	296.6	2.7	1.000021
65500.0	56.4	-58.7			91.6	570.6	311.1	2.1	1.000020
66000.0	55.1	-58.2			89.2	571.2	328.7	2.5	1.000020
66500.0	53.7	-57.7			86.9	571.8	340.5	2.8	1.000019
67000.0	52.5	-57.2			84.6	572.4	350.1	3.1	1.000019
67500.0	51.2	-56.8			82.4	573.1	3.4	3.3	1.000018
68000.0	50.0	-56.3			80.3	573.7	14.3	3.7	1.000018
68500.0	48.8	-56.0			78.3	574.0	8.8	3.2	1.000017
69000.0	47.7	-55.8			76.4	574.3	358.4	2.9	1.000017
69500.0	46.6	-55.6			74.5	574.7	339.8	3.8	1.000017
70000.0	45.5	-55.3			72.7	575.0			1.000016
70500.0	44.4	-55.1			70.9	575.3			1.000016
71000.0	43.4	-54.8			69.2	575.7			1.000015
71500.0	42.3	-54.6			67.5	576.0			1.000015
72000.0	41.4	-54.3			65.8	576.3			1.000015

STATION ALTITUDE 3912.75 FEET MSL
16 FEB. 83 0930 HRS MST
ASCENSION NO. 8

MANDATORY LEVELS
0470290008
EAST-28/CHERRY

DECIMAL COORDINATES
32.89927 LAT DEG
110.40591 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4866.	8.5	-1.9	48.	110	2.4
800.0	6507.	6.0	-4.4	44.	190	5.3
750.0	8282.	5.2	-10.1	32.	237	3.8
700.0	10080.	2.1	-10.1	40.	217	7.1
650.0	12029.	-1.8	-12.8	43.	234	9.9
600.0	14106.	-4.9	-16.4	40.	220	12.4
550.0	16334.	-9.3	-22.5	33.	283	19.6
500.0	18725.	-15.3	-27.6	34.	286	20.2
450.0	21301.	-22.0	-36.2	26.	292	22.3
400.0	24105.	-28.5	-41.6	27.	310	23.8
350.0	27134.	-36.4	-48.3	28.	313	29.7
300.0	30630.	-46.2			313	29.5
250.0	34516.	-56.5			312	32.6
200.0	39059.	-62.7			298	39.6
175.0	41799.	-57.7			279	25.6
150.0	44993.	-57.0			274	30.2
125.0	48812.	-55.3			285	23.7
100.0	53448.	-58.0			257	27.9
80.0	58090.	-57.5			302	10.0
70.0	60832.	-61.3			272	16.3
60.0	63976.	-59.9			297	6.2
50.0	67744.	-56.3			14	3.7

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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